

UNITED STATES PATENT OFFICE.

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ELECTRIC VAPORIZER.

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This invention relates to an electric vaporizer, the main object of which is to provide a simple, easily portable, and thoroughly hygienic device of the character described in which various liquids may be vaporized by an electric heater therein and the vapor discharged through a restricted nozzle so that it may be expelled in jet form in any direction some distance from the container under its own expansive force for medicinal, sterilizing, odorizing or deodorizing purposes.

Another object is to construct the heater in such manner that when the liquid is vaporized to such an extent as to fall below the level of the electrodes of the heater, it will automatically break the electric circuit thereby removing the danger of overheating in case the heating circuit should remain closed when contact of the liquid with the electrodes ceases.

Another object is to construct the device in such manner that the container for the liquid may be removed from its supporting frame and when so removed will automatically break the heating circuit to prevent injury to the user by contact with the electrodes in the container.

Another object is to provide the container with a removable cover in which the restricted nozzle is formed and upon which the electric heater is mounted so that when removed the container, cover and heater may be thoroughly cleansed or the heating elements adjusted without displacement from the cover.

Other objects and uses relating to specific parts of the device will be brought out in the following description.

In the drawings:—

Figure 1 is a perspective view of an electric vaporizer in which the liquid retainer is shown as partially removed from its supporting frame thereby disconnecting the switch contacts for breaking the heater circuit.

Figure 2 is an enlarged side elevation of the same device with the parts assembled ready for use.

Figure 3 is a further enlarged vertical sectional view taken on line 3—3, Figure 2.

Figure 4 is an enlarged vertical sectional view of the same device taken at right angles to that shown in Figure 3 in the plane of line 4—4, Figure 3.

As illustrated, this device comprises a main supporting frame —1—, a container

—2— and an electric heater —3— together with a suitable coupler —4— for electrically connecting and disconnecting the electrodes in and from the heater circuit.

The frame —1— comprises a base section —5— of sheet metal or equivalent material having a shallow cup shaped top portion —6— for receiving and supporting the lower end of the container —2— against lateral displacement when adjusted for use by permitting said container to be readily removed from the frame when desired in a manner hereinafter described.

An upright spring arm —7— forming a part of the main frame —1— is secured at its lower end by screws —8— to the periphery of the base —5— at one side of and preferably in spaced relation to the container —2—, said spring arm —7— having its upper end secured by screws —9— to one side of the coupler —4— for yieldingly supporting said coupler relatively to the base —5—.

The intermediate portion of the spring arm —7— is bowed outwardly at —7'— to increase its resiliency and permit the upper end of the spring with the coupler —4— thereon to move toward and from the base in the act of connecting and disconnecting the electrodes of the heater in and from the heating circuit, said bowed portion —7'— also serving as a handle by which the entire device may be supported and manipulated.

The container —2— for the liquid to be vaporized preferably comprises a transparent jar —10— of glass or equivalent material and a cover —11— which is preferably made of sheet metal.

The upper end of the jar or bottle —10— is threaded externally for receiving a threaded flange —12— on the cover —3— which may, therefore, be clamped upon and released from the jar by reverse turning movement.

The cover —11— is provided at one side of its axis with a laterally and upwardly extending nozzle —13— having a restricted passage —14— through which the liquid vapor is expelled by its own expansive force in the form of a jet some distance from the receptacle depending upon the degree of vaporization thus permitting the vapor jet to be projected in any direction by simply manipulating the device so as to point the nozzle in the direction desired.

The heater —3— preferably comprises a pair of upright electric conductor bars